



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/527,650	09/23/2005	Gary D Spinks	930058-2003	7112

7590 06/24/2008
Ronald R Santucci
Frommer Lawrence & Haug
745 Fifth Avenue
New York, NY 10151

EXAMINER

SYKES, ALTREV C

ART UNIT	PAPER NUMBER
----------	--------------

1794

MAIL DATE	DELIVERY MODE
-----------	---------------

06/24/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/527,650	Applicant(s) SPINKS, GARY D	
	Examiner ALTREV C. SYKES	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
4a) Of the above claim(s) 18-39, 42 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-17 and 39-41 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2005923, 2005314</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I claims 1-17 and 39-41 filed on May 21, 2008 is acknowledged. Claims 18-38 and 42 of Groups II-IV are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to nonelected Groups II there being no allowable generic or linking claim.
2. The traversal is on the grounds that the special technical feature of the group I claims is a fibre having a plurality of regions printed on front and rear sides of said fibre, wherein said regions are coloured and the colours are visible only under ultra-violet light. This feature is not found in US No. 4,897,300 patent, as the '300 patent relates to a security thread having printed luminescent colors on **one side** of the thread. This is a distinct difference between the present invention and the security thread of the '300 patent, as the colors of the fibre of the present invention are visible regardless of orientation and without requiring a fibre material that is transparent. Hence, the special technical feature of the invention is not provided in the prior art, and thereby links the claims of groups I-IV. It is first noted by examiner that applicant does not argue the subject of the special technical feature as set forth by examiner in previous office action mailed April 15, 2008. As such, the present arguments are not found to be persuasive because Boehm (US 4,897,300) disclose a security thread that is printed with luminescent colors which may be produced in the normal manner, i.e. by printing strip shapes on flat sheets and then cutting them up. (See Col 4, lines 56-58) It is also possible to print on individual threads. (See Col 4, lines 58-59) Additionally, Boehm discloses if carrier material is transparent,

one need not worry about the constant orientation of the security thread during embedding, since the emitted colors are also recognizable from the back of the security thread through the carrier material. (See Col 5, lines 9-13) Therefore, it is noted by examiner that it would have been obvious and within the ordinary skill of one in the art to provide a coating of the luminescent colors that would be sufficient to act in the same manner as claimed by applicant in order to provide for the result as disclosed by Boehm.

In regards to the distinct difference between the present invention and the security thread of Boehm, the arguments are not germane to the unity between the restricted claim groups because applicant cites limitations which do not appear as a special technical feature of the instant claims. Applicants argue that the colors of the fibre of the present invention are visible regardless of orientation and without requiring a fibre material that is transparent. It is noted by examiner that instant claim 16 recites that a varnish is applied to the outer surface of the fiber. According to a Webster's Online Dictionary, a varnish is a paint that provides a hard glossy transparent coating. This is suggested by the Boehm reference as set forth above but is not the only option. Additionally, it is noted that the instant claims do not make mention of a limitation in regards to orientation of the fibre in a final product. More emphasis is placed on the pattern of the colored region of the fiber itself.

Further applicant argues enforcing the present restriction requirement would result in inefficiencies and unnecessary expenditures by the Applicants and the PTO, as well as extreme prejudice to Applicants particularly in view of GATT. This is not found persuasive because said arguments are not germane to the fact that the groups of claims

as presented in the office action mailed April 15, 2008 clearly established that there was a lack of unity of invention. "A group of inventions is considered linked to form a single general inventive concept where there is a technical relationship among the inventions that involves at least one common or corresponding special technical feature. The expression special technical features is defined as meaning those technical features that define the contribution which each claimed invention, considered as a whole, makes over the prior art." MPEP 1893.03(d)

Additionally, applicant argues that restriction has not been shown to be proper, especially since the Office Action has not provided the requisite showing that the special technical feature of the group I-IV claims is provided in the prior art. Further, in view of the relationships between all of the claimed combinations, the search and examination of each combination is likely to be coextensive and, in any event, would involve such interrelated art that the search and examination of the entire application can be made without undue burden on the Examiner. These arguments are not found persuasive as examiner has established above and in the previous office action that the claimed invention does not contain a special technical feature that makes a contribution over the prior art thereby requiring restriction. Additionally, the examiner notes that there is more involved in examining a patent application besides searching, such as formulating rejections and evaluating applicant's arguments.

3. The restriction requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
6. Claim 1, 2, 4, 7, 13, 15, 16, 39 and 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Boehm (US 4,897,300)

Regarding claims 1, 39 and 41, Boehm discloses a security thread provided with luminescent colors that are invisible in normal lighting and are provided along the security thread in successive and overlapping portions which, when the colors are excited, have a length recognizable to the naked eye and, each printed with different luminescent colors. (See Col 1, lines 4-7 and 52-58) The corresponding security paper need only be exposed to UV radiation. (See Col 2, lines 25-30) In UV light, the formerly colorless, inconspicuous security thread suddenly acquires an intensely colorful effect. (See Col 2, lines 44-47) The security thread that is printed with luminescent colors may

be produced in the normal manner, i.e. by printing strip shapes on flat sheets and then cutting them up. (See Col 4, lines 56-58) It is also possible to print on individual threads. (See Col 4, lines 58-59) Additionally, Boehm discloses if carrier material is transparent, one need not worry about the constant orientation of the security thread during embedding, since the emitted colors are also recognizable from the back of the security thread through the carrier material. (See Col 5, lines 9-13) If an opaque carrier material is used, however, one must make sure the security thread has constant orientation in the paper if the fluorescent effects are to appear on the same side in all security papers; otherwise the carrier material must be printed on both sides. (See Col 5, lines 13-19) Therefore, it is noted by examiner that it would have been obvious and within the ordinary skill of one in the art to provide a coating (i.e. printing) of the luminescent colors to the fiber that would be sufficient to act in the same manner as claimed by applicant in order to provide for the result as disclosed by Boehm of having luminescence seen from both sides of an embedded fiber.

Regarding claims 2, 4, 7, 13, 15 and 16 Boehm discloses a fiber wherein:

- said regions are striped regions and said striped regions include two or more differently coloured striped regions. (See Figure 1, Col 3, lines 49-56 and Col 4, lines 55-60)
- the coloured striped regions appear in the same order in a repeating pattern. (See Col 3, line 49-56)
- said striped regions include three or more differently coloured striped regions. (See Figure 1 and Col 3, lines 29-38)

- the regions are printed such that regions on the front and rear sides are in register with one another and have the same colour. (See Col 5, lines 4-18 wherein the emitted colors are recognizable from the back of the security thread)
- the fibre is cut from a larger fibre. (See Col 4, lines 56-60)
- wherein a varnish is applied to the outer surface of the fibre. (See carrier material Col 5, lines 4-18)

7. Claims 2-7, 14 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boehm (US 4,897,300) as applied to claim 1 above, in view of Kaule et al. (US 4,756, 557).

Boehm discloses all of the claim limitations as set forth above. However, the reference does not disclose said fibre comprises regions of color which do not overlap.

Kaule et al. also discloses a security document having a security thread embedded in the interior of the document visible in transmitted light. (See Col 1, lines 8-14) In a preferred embodiment, at least three stripes extending lengthwise on the thread and arranged exactly parallel to each other, which differ in terms of their physical behavior, for example their color, their fluorescent or their magnetic properties. (See Col 2, lines 35-40) They are arranged in a clearly and precisely defined correlation with one another in longitudinally parallel areas which are sharply delimited from one another. (See Col 4, lines 58-61 and Figure 2)

As Boehm and Kaule et al. are both directed to security threads having UV luminescence, the art is analogous. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the parallel striped regions as disclosed by Kaule et al. in place of the overlapping regions as disclosed by Boehm for the purpose of providing a fiber having different physical properties along its length. (See Col 2, lines 50-64) The width of the individual areas and the distances therebetween would provide for another test criterion for the authenticity of the fiber by simple measurement. (See Col 2, lines 50-64)

Regarding claim 3, modified Boehm fails to teach said striped regions are placed at about 1mm gradations. It would have been obvious to one of ordinary skill in the art at the time the invention was made to optimize the region distances since it has been held that, where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). The burden is upon the Applicant to demonstrate that the claimed region distances is critical and has unexpected results. In the present invention, one would have been motivated to optimize the striped region distances motivated by the desire to use the measurement of the width of the individual areas and the distances therebetween as another test criterion for the authenticity of the security threads. (See Kaule et al. Col 2, lines 50-64)

Regarding claims 4-7 and 14 modified Boehm discloses all of the claim limitations as set forth above.

Additionally, modified Boehm discloses a fiber wherein:

- the coloured striped regions appear in the same order in a repeating pattern. (See Figure 4b and Col 5, lines 47-65)
- said fibre comprises only two striped regions, the first striped region having a first colour and the second striped region having a second colour. (See Figure 4a and Col 5, lines 43-46)
- each of said striped regions covers half of said fibre. (See Col 4, lines 62-65 and Figure 4a)
- said striped regions include three or more differently coloured striped regions. (See Figure 4c and Col 5, lines 65-67)
- the regions abut one another with no overlap of colour at the boundaries of the regions. (See Col 4, lines 58-61)

Regarding claim 40, modified Boehm discloses:

- A fibre having a plurality of regions having printing visible on front and rear sides of said fibre, wherein said regions are coloured and the colours are visible only under ultra-violet light. (See Col 3, lines 60-67)

8. Claims 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boehm (US 4,897,300) as applied to claim 1 above, in view of Tillotson (US 3, 898, 035).

Boehm discloses all of the claim limitations as set forth above but the reference does not specifically disclose the regions are arranged in a pseudo-random pattern.

Tillotson discloses a method for coloring yarn continuously in sheets having a more regular control of the color of dyed yarns, as well as the lateral and longitudinal distribution of colored portions of the yarn. (See Abstract and Col 1, lines 58-62)

Tillotson also teaches a method of producing random or pseudo-random dyed yarn in a web, or ordered dyed yarns in a web using one or more colors. (See Col 1, lines 63-68)

Further disclosed is the production of yarn dyed or printed with a predetermined pattern of any desired configuration using one or more colors. (See Col 2 lines 1-3) It would have been prima facie case obviousness to one of ordinary skill in the art at the time of the invention to modify the number of colored regions of the dyed yarn as well as the length of each region in order to produce a yarn of sufficient longitudinal distribution. It is noted that yarn is recited by the Webster's Dictionary as a fine cord of twisted fibers.

As Boehm and Tillotson are both directed to the coloring of fibers, the art is analogous. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the random method of dying yarns as taught by Tillotson as the method of printing the different luminescent colors on the fiber as disclosed by Boehm for the purpose of providing a fiber having colored regions not in the order of the natural spectrum thereby providing increased counterfeit protection.

9. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Boehm (US 4,897,300) as applied to claim 1 above, in view of Whitehead (US 2, 208, 653).

Boehm discloses all of the claim limitations as set forth above but the reference does not specifically disclose the fiber is manufactured from tissue paper.

Whitehead discloses identifiable paper and other cellulosic materials wherein the mark of identification comprises fibers which are fluorescent in ultra-violet light, soluble in solvents that have no effect on the cellulosic fibers and capable of being colored so that they are completely fast to acids, alkalies, bleaching agents, etc.(See Col 1, lines 1-9)

Whitehead further discloses, sheet cellulosic material, such as tissue paper, and incorporated in said cellulosic material fibers, formed of or containing an organic ester of cellulose and a tertiary amine having at least two aryl substitution groups, of any desired denier, color, length, or mixtures of such fibers. (See Col 2, lines 10-19) the fibers may be incorporated in the cellulosic material in any suitable manner, such as by feeding a lap or roving formed of organic ester of cellulose fibers to the paper stock or by forming a suspension of the said fiber and flowing it into the paper stock. (See Col 2, lines 20-31) It is noted that the fibers being composed of cellulosic materials would act as fibers of tissue paper.

As Boehm and Whitehead are both directed to fibers which have fluorescence, the art is analogous. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the cellulose derived fibers as taught by Whitehead in place of the fibers as disclosed by Boehm in order to provide a final security document in which a mixture of fibers can be incorporated having different denier, color, and/or composition. (See Col 1, lines 45-55)

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALTREV C. SYKES whose telephone number is

Art Unit: 1794

(571)270-3162. The examiner can normally be reached on Monday-Thursday, 8AM-5PM EST, alt Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1254. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ACS/
6/10/08

/Carol Chaney/

Supervisory Patent Examiner, Art Unit 1794